



**Competency 1.9** Industrial hygiene personnel shall demonstrate a working level knowledge of the methods used to educate people about protecting themselves, others, and the environment from health and environmental stressors.

**1. Supporting Knowledge and Skills**

- a. Discuss how the following training elements are used to produce an effective presentation of health and environmental health stressors.
  - Developing and organizing education materials
  - Identifying resource materials
  - Regulatory training requirements
- b. Discuss the importance of including the following considerations in workers training on health and environmental stressors.
  - Potential hazards for types of jobs and their control
  - Interpreting and explaining material safety data sheets (MSDS) and other information materials.
  - Work place processes and operations
  - Purpose and operation of controls
  - Job descriptions and procedures
  - Communicating seriousness of potential hazards
  - Use and maintenance of personal protective equipment
  - Personal hygiene programs and facilities
- c. Provide examples of the following and explain why these topics should be included in educational material on health stressors.
  - Mass psychogenic response
  - Responses in the event of elevated exposure
  - Warning signs and symptoms of exposure
- d. Explain the importance of including emergency response procedures in worker training sessions.
- e. Identify the potential hazards associated with stresses in the home and environment which are related to work stress and should be covered in educational material.



### 2. Recommended Reading

#### Review

- DOE-HDBK-1078-94, *Training Program Handbook: A Systematic Approach to Training*, Section 4.0, "Development."
- *Fundamentals of Industrial Hygiene*, 3rd Edition, National Safety Council, Chapter 20.

### 3. Summary

Educating employees on workplace hazards and controls may be done for two reasons: (1) to achieve compliance with a regulatory requirement and (2) to provide employees with knowledge and skills needed to recognize and control the hazards of their jobs.

Education for the former purpose is necessarily less flexible in that educational content is generally specified and sometimes does not cover the real risks of the job. Commercial products in video format will often be available that partially or completely meet the legal requirements. Education in this format, or in strict accordance with any regulation may not provide employees with sufficient knowledge or motivation to protect themselves, so the employer should supplement and enhance this education to fill the gaps and enhance its relevance.

The employer has much more opportunity for creativity in educating employees to potential or recognized hazards when the content of the education is not mandated. The education should be as relevant as possible to the employee's actual risks.

Education of employees should be pursued for both immediate and long-term purposes. If the purpose is immediate, i.e., it relates to an operation that is about to begin, education should be both oral and in writing. The written portion could be in the form of a work permit, SOP, project safety and health plan, or MSDS with the important areas highlighted and entire documents available for reference. More important will be the verbal overview provided by supervisor, perhaps assisted by someone with more industrial hygiene background, emphasizing the important points and answering any questions.

Education with no immediate need or objective, but rather for long-term understanding, should also be performed. This may be accomplished in a variety of methods, e.g., courses, seminars, briefings, computer-based training, or hands-on exercises. This education may also be effective through short, written communications describing exposure or situations that could someday occur, emphasizing cause and effect, and lessons learned. A point of contact should also be provided in case the employee has any questions.



Educating groups of employees could also be achieved by offering up technical staff periodically for question-and-answer sessions from interested persons, or by scheduling lecture discussions with technical staff on issues of concern. It is important to keep these sessions focussed on the risks and controls and avoid becoming distracted by extraneous issues.

#### **4. Suggested Exercises**

Please refer to Scenarios 1, 2, and 5 in the Scenario section of this document.